

REMARKS

Claims 1-21 are pending in the present application.

The Office Action raised issues regarding application "Priority", the Specification and rejections under 35 USC §112. In addition, claims 1-3, 9-13, 15 and 9-21 were rejected under 35 USC §103(a) as being unpatentable over US 4,434,005 A1 ("Metz A1"). Claims 4-8 were rejected under 35 USC §103(a) as being unpatentable over Metz A1 as applied to claim 1 above, and further in view of US 6,409,793 to Edlinger A6. Claim 14 was rejected under 35 USC §103(a) as being unpatentable over Metz A1 as applied to claim 1 above, and in view of EP 0866139 (Mathur A3). Claims 16-18 were rejected under 35 USC §103(a) as being unpatentable over Metz A1 as applied to claim 15 above and in view of US 6,322,610 (Pavlicevic A2).

Regarding the issue of Priority, the undersigned on January 31, 2008 had a telephone conversation with the Examiner who at that time confirmed that a proper and timely claim for foreign priority was provided upon filing of the present application. The Examiner further confirmed in said telephone conference that the Application Data Sheet correctly identified the Priority claim and that the Office Action at paragraph 1 is inaccurate. Accordingly, a petition to correct the claim of priority is not required. The Examiner requested that the present Response memorialize the above, and that she would acknowledge a proper and timely claim of priority in a subsequent communication from the Office after the present Response is filed.

Regarding the objection to the disclosure in the Specification, attached please find a copy of FIG. 2 as originally filed. The drawing sheet for FIG. 2 has

reference number 24 circled thereon. Accordingly, it respectfully is submitted that element 24 found in the Specification is identified in the drawing figures. It is also noted that the Office Action Summary at box "10" indicates that the "drawing(s) filed on 10 September 2004 is/are accepted by the Examiner." Withdrawal of the informality objection is therefore respectfully requested.

Regarding the rejections under 35 USC §112, the following comments are provided. The term "first part of a refining operation" in claim 19 can be found in the specification as originally filed at page 8, lines 18-19. The term "before the end of the refining operation" in claim 21 can be found in the specification as originally filed at page 8, lines 19-22. It is submitted that such disclosure at page 8 for the subject matter of claims 19 and 21, taken in conjunction with the remaining disclosure for the invention, is sufficient for one skilled in the art to understand such claims and the method by which such is practiced. Therefore, it respectfully is submitted that claims 19 and 21 comply with 35 USC §112, as do the remaining pending claims, and accordingly the corresponding rejection should be withdrawn.

Regarding the rejections under 35 USC §103, the following remarks are provided. Independent claim 1 is amended to include:

**"forming velocities of the first and the second supersonic gas jets for controlling migration of said particulate material between said first and second supersonic gas jets."**

Metz et al. (US 4, 434,005) discloses a method of and apparatus for refining a melt containing solid cooling material, wherein a neutral gas with entrained carbon particles are injected perpendicularly and centrally from the lance head into a melt around which a plurality of hard oxygen jets, and further around which

a plurality of soft oxygen jets are provided, as disclosed in Metz et al. at figure 3 and at column 5, line 54 through column 6, line 6. Metz also teaches that it is "of course necessary that the lance comprises means which ensure that there cannot be at any moment a contact between the carbon and oxygen, either in the lance body or, as far as possible, in the path extending between the lance head and the bath surface." (Col. 4, Ins. 37-42) [emphasis mine] That is not what is being claimed.

As called for in amended independent claim 1, migration of the particulate material may occur between the supersonic gas jets, i.e. the first supersonic gas jet which can as per dependent claim 12 be oxygen, and the second supersonic gas jet. See the specification as originally filed at page 7, lines 11-17. It is provided for in amended independent claim 1 that the particulate material can migrate between the supersonic jets depending upon velocity selected for the jets. Metz teaches in exactly the opposite direction of amended independent claim 1. See the discussion about Metz above. Therefore, it respectfully is submitted that one would not be inclined or guided by Metz to permit the carbon particles in Metz, which are provided in the neutral gas, to make contact with or migrate to an oxygen jet, which is permitted in amended independent claim 1. Accordingly, there is no disclosure or guidance for one skilled in the art to modify Metz to arrive at the invention of amended independent claim 1. Therefore, it respectfully is submitted that independent claim 1, and the claims which depend therefrom, are patentably distinct from Metz and any other references of record.

The remaining amendments to the claims are to provide for antecedent support amongst claim terminology and as to matters of grammar.

All issues raised in the Office Action are believed to have been addressed. In view of the foregoing amendments and remarks, favorable action on the merits,

including entry of all amendments and allowance of all claims pending,  
respectfully is requested.

The Examiner is invited to contact the undersigned by telephone to discuss any  
issues remaining for allowance of the present application.

Respectfully submitted,

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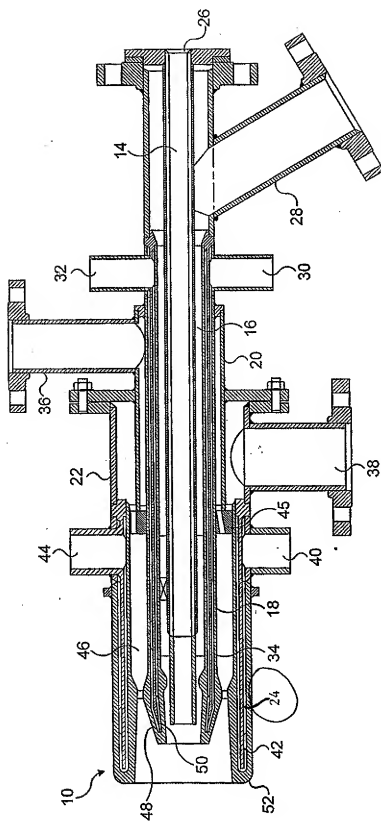


FIG. 2